

## SEQUENCE LISTING

<110> Bayer Pharmaceuticals Corporation  
Pauloski, Nicole  
Liu, Li

<120> Gene Expression Profiles and Methods of Use

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<150> US 60/529,432

<151> 2003-12-12

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<210> 5
<211> 1536
<212> DNA
<213> Homo sapiens

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<210> 6
<211> 783
<212> DNA
<213> Homo sapiens

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<210> 7
<211> 4068
<212> DNA
<213> Homo sapiens

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 <213> Homo sapiens

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<213> Homo sapiens

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 <212> DNA  
 <213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

<400> 20

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Pro Asn Ser Met Val Val Glu His Pro Glu Phe Leu Lys Ala Gly Lys  
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Glu Pro Gly Leu Gln Ile Trp Arg Val Glu Lys Phe Asp Leu Val Pro  
 65 70 75 80

Val Pro Thr Asn Leu Tyr Gly Asp Phe Phe Thr Gly Asp Ala Tyr Val  
 85 90 95

Ile Leu Lys Thr Val Gln Leu Arg Asn Gly Asn Leu Gln Tyr Asp Leu  
 100 105 110

His Tyr Trp Leu Gly Asn Glu Cys Ser Gln Asp Glu Ser Gly Ala Ala  
 115 120 125

Ala Ile Phe Thr Val Gln Leu Asp Asp Tyr Leu Asn Gly Arg Ala Val  
 130 135 140

Gln His Arg Glu Val Gln Gly Phe Glu Ser Ala Thr Phe Leu Gly Tyr  
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Phe Lys Ser Gly Leu Lys Tyr Lys Lys Gly Gly Val Ala Ser Gly Phe  
 165 170 175

Lys His Val Val Pro Asn Glu Val Val Val Gln Arg Leu Phe Gln Val  
 180 185 190

Lys Gly Arg Arg Val Val Arg Ala Thr Glu Val Pro Val Ser Trp Glu  
 195 200 205

Ser Phe Asn Asn Gly Asp Cys Phe Ile Leu Asp Leu Gly Asn Asn Ile  
 210 215 220

His Gln Trp Cys Gly Ser Asn Ser Asn Arg Tyr Glu Arg Leu Lys Ala  
 225 230 235 240

Thr Gln Val Ser Lys Gly Ile Arg Asp Asn Glu Arg Ser Gly Arg Ala  
 245 250 255  
 Arg Val His Val Ser Glu Glu Gly Thr Glu Pro Glu Ala Met Leu Gln  
 260 265 270  
 Val Leu Gly Pro Lys Pro Ala Leu Pro Ala Gly Thr Glu Asp Thr Ala  
 275 280 285  
 Lys Glu Asp Ala Ala Asn Arg Lys Leu Ala Lys Leu Tyr Lys Val Ser  
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 Asn Gly Ala Gly Thr Met Ser Val Ser Leu Val Ala Asp Glu Asn Pro  
 305 310 315 320  
 Phe Ala Gln Gly Ala Leu Lys Ser Glu Asp Cys Phe Ile Leu Asp His  
 325 330 335  
 Gly Lys Asp Gly Lys Ile Phe Val Trp Lys Gly Lys Gln Ala Asn Thr  
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 Glu Glu Arg Lys Ala Ala Leu Lys Thr Ala Ser Asp Phe Ile Thr Lys  
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 Met Asp Tyr Pro Lys Gln Thr Gln Val Ser Val Leu Pro Glu Gly Gly  
 370 375 380  
 Glu Thr Pro Leu Phe Lys Gln Phe Phe Lys Asn Trp Arg Asp Pro Asp  
 385 390 395 400  
 Gln Thr Asp Gly Leu Gly Leu Ser Tyr Leu Ser Ser His Ile Ala Asn  
 405 410 415  
 Val Glu Arg Val Pro Phe Asp Ala Ala Thr Leu His Thr Ser Thr Ala  
 420 425 430  
 Met Ala Ala Gln His Gly Met Asp Asp Asp Gly Thr Gly Gln Lys Gln  
 435 440 445  
 Ile Trp Arg Ile Glu Gly Ser Asn Lys Val Pro Val Asp Pro Ala Thr  
 450 455 460  
 Tyr Gly Gln Phe Tyr Gly Gly Asp Ser Tyr Ile Ile Leu Tyr Asn Tyr  
 465 470 475 480  
 Arg His Gly Gly Arg Gln Gly Gln Ile Ile Tyr Asn Trp Gln Gly Ala  
 485 490 495  
 Gln Ser Thr Gln Asp Glu Val Ala Ala Ser Ala Ile Leu Thr Ala Gln  
 500 505 510

Leu Asp Glu Glu Leu Gly Gly Thr Pro Val Gln Ser Arg Val Val Gln  
 515 520 525  
 Gly Lys Glu Pro Ala His Leu Met Ser Leu Phe Gly Gly Lys Pro Met  
 530 535 540  
 Ile Ile Tyr Lys Gly Gly Thr Ser Arg Glu Gly Gly Gln Thr Ala Pro  
 545 550 555 560  
 Ala Ser Thr Arg Leu Phe Gln Val Arg Ala Asn Ser Ala Gly Ala Thr  
 565 570 575  
 Arg Ala Val Glu Val Leu Pro Lys Ala Gly Ala Leu Asn Ser Asn Asp  
 580 585 590  
 Ala Phe Val Leu Lys Thr Pro Ser Ala Ala Tyr Leu Trp Val Gly Thr  
 595 600 605  
 Gly Ala Ser Glu Ala Glu Lys Thr Gly Ala Gln Glu Leu Leu Arg Val  
 610 615 620  
 Leu Arg Ala Gln Pro Val Gln Val Ala Glu Gly Ser Glu Pro Asp Gly  
 625 630 635 640  
 Phe Trp Glu Ala Leu Gly Gly Lys Ala Ala Tyr Arg Thr Ser Pro Arg  
 645 650 655  
 Leu Lys Asp Lys Lys Met Asp Ala His Pro Pro Arg Leu Phe Ala Cys  
 660 665 670  
 Ser Asn Lys Ile Gly Arg Phe Val Ile Glu Glu Val Pro Gly Glu Leu  
 675 680 685  
 Met Gln Glu Asp Leu Ala Thr Asp Asp Val Met Leu Leu Asp Thr Trp  
 690 695 700  
 Asp Gln Val Phe Val Trp Val Gly Lys Asp Ser Gln Glu Glu Glu Lys  
 705 710 715 720  
 Thr Glu Ala Leu Thr Ser Ala Lys Arg Tyr Ile Glu Thr Asp Pro Ala  
 725 730 735  
 Asn Arg Asp Arg Arg Thr Pro Ile Thr Val Val Lys Gln Gly Phe Glu  
 740 745 750  
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 <212> PRT  
 <213> Homo sapiens

<400> 21

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 Gln Ser Lys Tyr Lys Ile Ala Ile Gln His Gln Val Leu Val Val Asn  
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 Gly Gly Glu Cys Met Ala Ala Asp Arg Arg Val Cys Thr Tyr Ser Ala  
 50 55 60  
 Gly Thr Asp Thr Asn Pro Ile Phe Leu Phe Asn Lys Glu Met Ile Leu  
 65 70 75 80  
 Cys Asp Arg Pro Pro Ala Ile Pro Lys Thr Thr Phe Ser Thr Glu Asn  
 85 90 95  
 Asp Met Glu Ile Lys Val Glu Glu Ser Leu Met Met Pro Ala Val Phe  
 100 105 110  
 His Thr Val Ala Ser Arg Thr Gln Leu Ala Leu Glu Met Tyr Glu Val  
 115 120 125  
 Ala Lys Lys Leu Cys Ser Phe Cys Glu Gly Leu Val His Asp Glu His  
 130 135 140  
 Leu Gln His Gln Gly Trp Ala Ala Ile Met Ala Asn Leu Glu Asp Cys  
 145 150 155 160  
 Ser Asn Ser Tyr Gln Lys Leu Leu Phe Lys Phe Glu Ser Ile Tyr Ser  
 165 170 175  
 Asn Tyr Leu Gln Ser Ile Glu Asp Ile Lys Leu Lys Leu Thr His Leu  
 180 185 190  
 Gly Thr Ala Val Ser Val Met Ala Lys Ile Pro Leu Leu Glu Cys Leu  
 195 200 205  
 Thr Arg His Ser Tyr Arg Glu Cys Leu Gly Arg Leu Asp Ser Leu Pro  
 210 215 220  
 Glu His Glu Asp Ser Glu Lys Ala Glu Thr Lys Arg Ser Thr Glu Leu  
 225 230 235 240

Val Leu Ser Pro Asp Met Pro Arg Thr Thr Asn Glu Ser Leu Leu Thr  
 245 250 255  
 Ser Phe Pro Lys Ser Val Glu His Val Ser Pro Asp Thr Ala Asp Ala  
 260 265 270  
 Glu Ser Gly Lys Glu Ile Arg Glu Ser Cys Gln Ser Thr Val His Gln  
 275 280 285  
 Gln Asp Glu Thr Thr Ile Asp Thr Lys Asp Gly Asp Leu Pro Phe Phe  
 290 295 300  
 Asn Val Ser Leu Leu Asp Trp Ile Asn Val Gln Asp Arg Pro Asn Asp  
 305 310 315 320  
 Val Glu Ser Leu Val Arg Lys Cys Phe Asp Ser Met Ser Arg Leu Asp  
 325 330 335  
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 340 345 350  
 Lys Leu Asp Asn Gln Asn Met Lys Ala Ile Lys Gly Leu Glu Asp Arg  
 355 360 365  
 Leu Tyr Ala Leu Asp Gln Met Ile Ala Ser Cys Gly Arg Leu Val Asn  
 370 375 380  
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 385 390 395 400  
 Glu Asn Leu Lys Asp Ala Ser Val Leu Pro Asp Leu Cys Leu Ser His  
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 420 425 430  
 Ile Lys Gln Lys Cys Thr Thr Ala Lys Gln Glu Leu Ala Asn Asn Leu  
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 450 455 460  
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 465 470 475 480  
 Glu Arg Val Lys Ile Val Glu Ala Leu Ser Thr Val Pro Gln Met Tyr  
 485 490 495  
 Cys Leu Ala Val Val Glu Val Val Arg Arg Lys Met Phe Ile Lys His  
 500 505 510

Tyr Arg Glu Trp Ala Gly Ala Leu Val Lys Asp Gly Lys Arg Leu Tyr  
 515 520 525

Glu Ala Glu Lys Ser Lys Arg Glu Ser Phe Gly Lys Leu Phe Arg Lys  
 530 535 540

Ser Phe Leu Arg Asn Arg Leu Phe Arg Gly Leu Asp Ser Trp Pro Pro  
 545 550 555 560

Ser Phe Cys Thr Gln Lys Pro Arg Lys Phe Asp Cys Glu Leu Pro Asp  
 565 570 575

Ile Ser Leu Lys Asp Leu Gln Phe Leu Gln Ser Phe Cys Pro Ser Glu  
 580 585 590

Val Gln Pro Phe Leu Arg Val Pro Leu Leu Cys Asp Phe Glu Pro Leu  
 595 600 605

His Gln His Val Leu Ala Leu His Asn Leu Val Lys Ala Ala Gln Ser  
 610 615 620

Leu Asp Glu Met Ser Gln Thr Ile Thr Asp Leu Leu Ser Glu Gln Lys  
 625 630 635 640

Ala Ser Val Ser Gln Thr Ser Pro Gln Ser Ala Ser Ser Pro Arg Met  
 645 650 655

Glu Ser Thr Ala Gly Ile Thr Thr Thr Thr Ser Pro Arg Thr Pro Pro  
 660 665 670

Pro Leu Thr Val Gln Asp Pro Leu Cys Pro Ala Val Cys Pro Leu Glu  
 675 680 685

Glu Leu Ser Pro Asp Ser Ile Asp Ala His Thr Phe Asp Phe Glu Thr  
 690 695 700

Ile Pro His Pro Asn Ile Glu Gln Thr Ile His Gln Val Ser Leu Asp  
 705 710 715 720

Leu Asp Ser Leu Ala Glu Ser Pro Glu Ser Asp Phe Met Ser Ala Val  
 725 730 735

Asn Glu Phe Val Ile Glu Glu Asn Leu Ser Ser Pro Asn Pro Ile Ser  
 740 745 750

Asp Pro Gln Ser Pro Glu Met Met Val Glu Ser Leu Tyr Ser Ser Val  
 755 760 765

Ile Asn Ala Ile Asp Ser Arg Arg Met Gln Asp Thr Asn Val Cys Gly  
 770 775 780



Lys Glu Asp Phe Gly Asp His Thr Ser Leu Asn Val Gln Leu Glu Arg  
 785 790 795 800  
 Cys Arg Val Val Ala Gln Asp Ser His Phe Ser Ile Gln Thr Ile Lys  
 805 810 815  
 Glu Asp Leu Cys His Phe Arg Thr Phe Val Gln Lys Glu Gln Cys Asp  
 820 825 830  
 Phe Ser Asn Ser Leu Lys Cys Thr Ala Val Glu Ile Arg Asn Ile Ile  
 835 840 845  
 Glu Lys Val Lys Cys Ser Leu Glu Ile Thr Leu Lys Glu Lys His Gln  
 850 855 860  
 Lys Glu Leu Leu Ser Leu Lys Asn Glu Tyr Glu Gly Lys Leu Asp Gly  
 865 870 875 880  
 Leu Ile Lys Glu Thr Glu Glu Asn Glu Asn Lys Ile Lys Lys Leu Lys  
 885 890 895  
 Gly Glu Leu Val Cys Leu Glu Glu Val Leu Gln Asn Lys Asp Asn Glu  
 900 905 910  
 Phe Ala Leu Val Lys His Glu Lys Glu Ala Val Ile Cys Leu Gln Asn  
 915 920 925  
 Glu Lys Asp Gln Lys Leu Leu Glu Met Glu Asn Ile Met His Ser Gln  
 930 935 940  
 Asn Cys Glu Ile Lys Glu Leu Lys Gln Ser Arg Glu Ile Val Leu Glu  
 945 950 955 960  
 Asp Leu Lys Lys Leu His Val Glu Asn Asp Glu Lys Leu Gln Leu Leu  
 965 970 975  
 Arg Ala Glu Leu Gln Ser Leu Glu Gln Ser His Leu Lys Glu Leu Glu  
 980 985 990  
 Asp Thr Leu Gln Val Arg His Ile Gln Glu Phe Glu Lys Val Met Thr  
 995 1000 1005  
 Asp His Arg Val Ser Leu Glu Glu Leu Lys Lys Glu Asn Gln Gln  
 1010 1015 1020  
 Ile Ile Asn Gln Ile Gln Glu Ser His Ala Glu Ile Ile Gln Glu  
 1025 1030 1035  
 Lys Glu Lys Gln Leu Gln Glu Leu Lys Leu Lys Val Ser Asp Leu  
 1040 1045 1050

Ser Asp Thr Arg Cys Lys Leu Glu Val Glu Leu Ala Leu Lys Glu  
 1055 1060 1065  
 Ala Glu Thr Asp Glu Ile Lys Ile Leu Leu Glu Glu Ser Arg Ala  
 1070 1075 1080  
 Gln Gln Lys Glu Thr Leu Lys Ser Leu Leu Glu Gln Glu Thr Glu  
 1085 1090 1095  
 Asn Leu Arg Thr Glu Ile Ser Lys Leu Asn Gln Lys Ile Gln Asp  
 1100 1105 1110  
 Asn Asn Glu Asn Tyr Gln Val Gly Leu Ala Glu Leu Arg Thr Leu  
 1115 1120 1125  
 Met Thr Ile Glu Lys Asp Gln Cys Ile Ser Glu Leu Ile Ser Arg  
 1130 1135 1140  
 His Glu Glu Glu Ser Asn Ile Leu Lys Ala Glu Leu Asn Lys Val  
 1145 1150 1155  
 Thr Ser Leu His Asn Gln Ala Phe Glu Ile Glu Lys Asn Leu Lys  
 1160 1165 1170  
 Glu Gln Ile Ile Glu Leu Gln Ser Lys Leu Asp Ser Glu Leu Ser  
 1175 1180 1185  
 Ala Leu Glu Arg Gln Lys Asp Glu Lys Ile Thr Gln Gln Glu Glu  
 1190 1195 1200  
 Lys Tyr Glu Ala Ile Ile Gln Asn Leu Glu Lys Asp Arg Gln Lys  
 1205 1210 1215  
 Leu Val Ser Ser Gln Glu Gln Asp Arg Glu Gln Leu Ile Gln Lys  
 1220 1225 1230  
 Leu Asn Cys Glu Lys Asp Glu Ala Ile Gln Thr Ala Leu Lys Glu  
 1235 1240 1245  
 Phe Lys Leu Glu Arg Glu Val Val Glu Lys Glu Leu Leu Glu Lys  
 1250 1255 1260  
 Val Lys His Leu Glu Asn Gln Ile Ala Lys Ser Pro Ala Ile Asp  
 1265 1270 1275  
 Ser Thr Arg Gly Asp Ser Ser Ser Leu Val Ala Glu Leu Gln Glu  
 1280 1285 1290  
 Lys Leu Gln Glu Glu Lys Ala Lys Phe Leu Glu Gln Leu Glu Glu  
 1295 1300 1305

Gln Glu Lys Arg Lys Asn Glu Glu Met Gln Asn Val Arg Thr Ser  
 1310 1315 1320  
 Leu Ile Ala Glu Gln Gln Thr Asn Phe Asn Thr Val Leu Thr Arg  
 1325 1330 1335  
 Glu Lys Met Arg Lys Glu Asn Ile Ile Asn Asp Leu Ser Asp Lys  
 1340 1345 1350  
 Leu Lys Ser Thr Met Gln Gln Gln Glu Arg Asp Lys Asp Leu Ile  
 1355 1360 1365  
 Glu Ser Leu Ser Glu Asp Arg Ala Arg Leu Leu Glu Glu Lys Lys  
 1370 1375 1380  
 Lys Leu Glu Glu Glu Val Ser Lys Leu Arg Ser Ser Ser Phe Val  
 1385 1390 1395  
 Pro Ser Pro Tyr Val Ala Thr Ala Pro Glu Leu Tyr Gly Ala Cys  
 1400 1405 1410  
 Ala Pro Glu Leu Pro Gly Glu Ser Asp Arg Ser Ala Val Glu Thr  
 1415 1420 1425  
 Ala Asp Glu Gly Arg Val Asp Ser Ala Met Glu Thr Ser Met Met  
 1430 1435 1440  
 Ser Val Gln Glu Asn Ile His Met Leu Ser Glu Glu Lys Gln Arg  
 1445 1450 1455  
 Ile Met Leu Leu Glu Arg Thr Leu Gln Leu Lys Glu Glu Glu Asn  
 1460 1465 1470  
 Lys Arg Leu Asn Gln Arg Leu Met Ser Gln Ser Met Ser Ser Val  
 1475 1480 1485  
 Ser Ser Arg His Ser Glu Lys Ile Ala Ile Arg Asp Phe Gln Val  
 1490 1495 1500  
 Gly Asp Leu Val Leu Ile Ile Leu Asp Glu Arg His Asp Asn Tyr  
 1505 1510 1515  
 Val Leu Phe Thr Val Ser Pro Thr Leu Tyr Phe Leu His Ser Glu  
 1520 1525 1530  
 Ser Leu Pro Ala Leu Asp Leu Lys Pro Gly Glu Gly Ala Ser Gly  
 1535 1540 1545  
 Ala Ser Arg Arg Pro Trp Val Leu Gly Lys Val Met Glu Lys Glu  
 1550 1555 1560

Tyr Cys Gln Ala Lys Lys Ala Gln Asn Arg Phe Lys Val Pro Leu  
 1565 1570 1575

Gly Thr Lys Phe Tyr Arg Val Lys Ala Val Ser Trp Asn Lys Lys  
 1580 1585 1590

Val

<210> 22  
 <211> 164  
 <212> PRT  
 <213> Homo sapiens

<400> 22

Met Ser Glu Pro Ala Gly Asp Val Arg Gln Asn Pro Cys Gly Ser Lys  
 1 5 10 15

Ala Cys Arg Arg Leu Phe Gly Pro Val Asp Ser Glu Gln Leu Ser Arg  
 20 25 30

Asp Cys Asp Ala Leu Met Ala Gly Cys Ile Gln Glu Ala Arg Glu Arg  
 35 40 45

Trp Asn Phe Asp Phe Val Thr Glu Thr Pro Leu Glu Gly Asp Phe Ala  
 50 55 60

Trp Glu Arg Val Arg Gly Leu Gly Leu Pro Lys Leu Tyr Leu Pro Thr  
 65 70 75 80

Gly Pro Arg Arg Gly Arg Asp Glu Leu Gly Gly Gly Arg Arg Pro Gly  
 85 90 95

Thr Ser Pro Ala Leu Leu Gln Gly Thr Ala Glu Glu Asp His Val Asp  
 100 105 110

Leu Ser Leu Ser Cys Thr Leu Val Pro Arg Ser Gly Glu Gln Ala Glu  
 115 120 125

Gly Ser Pro Gly Gly Pro Gly Asp Ser Gln Gly Arg Lys Arg Arg Gln  
 130 135 140

Thr Ser Met Thr Asp Phe Tyr His Ser Lys Arg Arg Leu Ile Phe Ser  
 145 150 155 160

Lys Arg Lys Pro

<210> 23  
 <211> 313  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 23

Met Pro Val Ala Gly Ser Glu Leu Pro Arg Arg Pro Leu Pro Pro Ala  
 1 5 10 15

Ala Gln Glu Arg Asp Ala Glu Pro Arg Pro Pro His Gly Glu Leu Gln  
 20 25 30

Tyr Leu Gly Gln Ile Gln His Ile Leu Arg Cys Gly Val Arg Lys Asp  
 35 40 45

Asp Arg Thr Gly Thr Gly Thr Leu Ser Val Phe Gly Met Gln Ala Arg  
 50 55 60

Tyr Ser Leu Arg Asp Glu Phe Pro Leu Leu Thr Thr Lys Arg Val Phe  
 65 70 75 80

Trp Lys Gly Val Leu Glu Glu Leu Leu Trp Phe Ile Lys Gly Ser Thr  
 85 90 95

Asn Ala Lys Glu Leu Ser Ser Lys Gly Val Lys Ile Trp Asp Ala Asn  
 100 105 110

Gly Ser Arg Asp Phe Leu Asp Ser Leu Gly Phe Ser Thr Arg Glu Glu  
 115 120 125

Gly Asp Leu Gly Pro Val Tyr Gly Phe Gln Trp Arg His Phe Gly Ala  
 130 135 140

Glu Tyr Arg Asp Met Glu Ser Asp Tyr Ser Gly Gln Gly Val Asp Gln  
 145 150 155 160

Leu Gln Arg Val Ile Asp Thr Ile Lys Thr Asn Pro Asp Asp Arg Arg  
 165 170 175

Ile Ile Met Cys Ala Trp Asn Pro Arg Asp Leu Pro Leu Met Ala Leu  
 180 185 190

Pro Pro Cys His Ala Leu Cys Gln Phe Tyr Val Val Asn Ser Glu Leu  
 195 200 205

Ser Cys Gln Leu Tyr Gln Arg Ser Gly Asp Met Gly Leu Gly Val Pro  
 210 215 220

Phe Asn Ile Ala Ser Tyr Ala Leu Leu Thr Tyr Met Ile Ala His Ile  
 225 230 235 240

Thr Gly Leu Lys Pro Gly Asp Phe Ile His Thr Leu Gly Asp Ala His  
 245 250 255

Ile Tyr Leu Asn His Ile Glu Pro Leu Lys Ile Gln Leu Gln Arg Glu  
 260 265 270

Pro Arg Pro Phe Pro Lys Leu Arg Ile Leu Arg Lys Val Glu Lys Ile  
 275 280 285

Asp Asp Phe Lys Ala Glu Asp Phe Gln Ile Glu Gly Tyr Asn Pro His  
 290 295 300

Pro Thr Ile Lys Met Glu Met Ala Val  
 305 310

<210> 24  
 <211> 179  
 <212> PRT  
 <213> Homo sapiens

<400> 24

Met Ala Ser Gln Asn Arg Asp Pro Ala Ala Thr Ser Val Ala Ala Ala  
 1 5 10 15

Arg Lys Gly Ala Glu Pro Ser Gly Gly Ala Ala Arg Gly Pro Val Gly  
 20 25 30

Lys Arg Leu Gln Gln Glu Leu Met Thr Leu Met Met Ser Gly Asp Lys  
 35 40 45

Gly Ile Ser Ala Phe Pro Glu Ser Asp Asn Leu Phe Lys Trp Val Gly  
 50 55 60

Thr Ile His Gly Ala Ala Gly Thr Val Tyr Glu Asp Leu Arg Tyr Lys  
 65 70 75 80

Leu Ser Leu Glu Phe Pro Ser Gly Tyr Pro Tyr Asn Ala Pro Thr Val  
 85 90 95

Lys Phe Leu Thr Pro Cys Tyr His Pro Asn Val Asp Thr Gln Gly Asn  
 100 105 110

Ile Cys Leu Asp Ile Leu Lys Glu Lys Trp Ser Ala Leu Tyr Asp Val  
 115 120 125

Arg Thr Ile Leu Leu Ser Ile Gln Ser Leu Leu Gly Glu Pro Asn Ile  
 130 135 140

Asp Ser Pro Leu Asn Thr His Ala Ala Glu Leu Trp Lys Asn Pro Thr  
 145 150 155 160

Ala Phe Lys Lys Tyr Leu Gln Glu Thr Tyr Ser Lys Gln Val Thr Ser  
 165 170 175

Gln Glu Pro

<210> 25  
 <211> 736  
 <212> PRT  
 <213> Homo sapiens  
 <400> 25  
 Met Lys Lys Ser Arg Ser Val Met Thr Val Met Ala Asp Asp Asn Val  
 1 5 10 15  
 Lys Asp Tyr Phe Glu Cys Ser Leu Ser Lys Ser Tyr Ser Ser Ser Ser  
 20 25 30  
 Asn Thr Leu Gly Ile Asp Leu Trp Arg Gly Arg Arg Cys Cys Ser Gly  
 35 40 45  
 Asn Leu Gln Leu Pro Pro Leu Ser Gln Arg Gln Ser Glu Arg Ala Arg  
 50 55 60  
 Thr Pro Glu Gly Asp Gly Ile Ser Arg Pro Thr Thr Leu Pro Leu Thr  
 65 70 75 80  
 Thr Leu Pro Ser Ile Ala Ile Thr Thr Val Ser Gln Glu Cys Phe Asp  
 85 90 95  
 Val Glu Asn Gly Pro Ser Pro Gly Arg Ser Pro Leu Asp Pro Gln Ala  
 100 105 110  
 Ser Ser Ser Ala Gly Leu Val Leu His Ala Thr Phe Pro Gly His Ser  
 115 120 125  
 Gln Arg Arg Glu Ser Phe Leu Tyr Arg Ser Asp Ser Asp Tyr Asp Leu  
 130 135 140  
 Ser Pro Lys Ala Met Ser Arg Asn Ser Ser Leu Pro Ser Glu Gln His  
 145 150 155 160  
 Gly Asp Asp Leu Ile Val Thr Pro Phe Ala Gln Val Leu Ala Ser Leu  
 165 170 175  
 Arg Ser Val Arg Asn Asn Phe Thr Ile Leu Thr Asn Leu His Gly Thr  
 180 185 190  
 Ser Asn Lys Arg Ser Pro Ala Ala Ser Gln Pro Pro Val Ser Arg Val  
 195 200 205  
 Asn Pro Gln Glu Glu Ser Tyr Gln Lys Leu Ala Met Glu Thr Leu Glu  
 210 215 220  
 Glu Leu Asp Trp Cys Leu Asp Gln Leu Glu Thr Ile Gln Thr Tyr Arg  
 225 230 235 240

Ser Val Ser Glu Met Ala Ser Asn Lys Phe Lys Arg Met Leu Asn Arg  
 245 250 255  
 Glu Leu Thr His Leu Ser Glu Met Ser Arg Ser Gly Asn Gln Val Ser  
 260 265 270  
 Glu Tyr Ile Ser Asn Thr Phe Leu Asp Lys Gln Asn Asp Val Glu Ile  
 275 280 285  
 Pro Ser Pro Thr Gln Lys Asp Arg Glu Lys Lys Lys Lys Gln Gln Leu  
 290 295 300  
 Met Thr Gln Ile Ser Gly Val Lys Lys Leu Met His Ser Ser Ser Leu  
 305 310 315 320  
 Asn Asn Thr Ser Ile Ser Arg Phe Gly Val Asn Thr Glu Asn Glu Asp  
 325 330 335  
 His Leu Ala Lys Glu Leu Glu Asp Leu Asn Lys Trp Gly Leu Asn Ile  
 340 345 350  
 Phe Asn Val Ala Gly Tyr Ser His Asn Arg Pro Leu Thr Cys Ile Met  
 355 360 365  
 Tyr Ala Ile Phe Gln Glu Arg Asp Leu Leu Lys Thr Phe Arg Ile Ser  
 370 375 380  
 Ser Asp Thr Phe Ile Thr Tyr Met Met Thr Leu Glu Asp His Tyr His  
 385 390 395 400  
 Ser Asp Val Ala Tyr His Asn Ser Leu His Ala Ala Asp Val Ala Gln  
 405 410 415  
 Ser Thr His Val Leu Leu Ser Thr Pro Ala Leu Asp Ala Val Phe Thr  
 420 425 430  
 Asp Leu Glu Ile Leu Ala Ala Ile Phe Ala Ala Ala Ile His Asp Val  
 435 440 445  
 Asp His Pro Gly Val Ser Asn Gln Phe Leu Ile Asn Thr Asn Ser Glu  
 450 455 460  
 Leu Ala Leu Met Tyr Asn Asp Glu Ser Val Leu Glu Asn His His Leu  
 465 470 475 480  
 Ala Val Gly Phe Lys Leu Leu Gln Glu Glu His Cys Asp Ile Phe Met  
 485 490 495  
 Asn Leu Thr Lys Lys Gln Arg Gln Thr Leu Arg Lys Met Val Ile Asp  
 500 505 510



Met Val Leu Ala Thr Asp Met Ser Lys His Met Ser Leu Leu Ala Asp  
515 520 525

Leu Lys Thr Met Val Glu Thr Lys Lys Val Thr Ser Ser Gly Val Leu  
530 535 540

Leu Leu Asp Asn Tyr Thr Asp Arg Ile Gln Val Leu Arg Asn Met Val  
545 550 555 560

His Cys Ala Asp Leu Ser Asn Pro Thr Lys Ser Leu Glu Leu Tyr Arg  
565 570 575

Gln Trp Thr Asp Arg Ile Met Glu Glu Phe Phe Gln Gln Gly Asp Lys  
580 585 590

Glu Arg Glu Arg Gly Met Glu Ile Ser Pro Met Cys Asp Lys His Thr  
595 600 605

Ala Ser Val Glu Lys Ser Gln Val Gly Phe Ile Asp Tyr Ile Val His  
610 615 620

Pro Leu Trp Glu Thr Trp Ala Asp Leu Val Gln Pro Asp Ala Gln Asp  
625 630 635 640

Ile Leu Asp Thr Leu Glu Asp Asn Arg Asn Trp Tyr Gln Ser Met Ile  
645 650 655

Pro Gln Ser Pro Ser Pro Pro Leu Asp Glu Gln Asn Arg Asp Cys Gln  
660 665 670

Gly Leu Met Glu Lys Phe Gln Phe Glu Leu Thr Leu Asp Glu Glu Asp  
675 680 685

Ser Glu Gly Pro Glu Lys Glu Gly Glu Gly His Ser Tyr Phe Ser Ser  
690 695 700

Thr Lys Thr Leu Cys Val Ile Asp Pro Glu Asn Arg Asp Ser Leu Gly  
705 710 715 720

Glu Thr Asp Ile Asp Ile Ala Thr Glu Asp Lys Ser Pro Val Asp Thr  
725 730 735

<210> 26  
<211> 97  
<212> PRT  
<213> Homo sapiens

<400> 26

Met Cys Ser Ser Leu Glu Gln Ala Leu Ala Val Leu Val Thr Thr Phe  
1 5 10 15

His Lys Tyr Ser Cys Gln Glu Gly Asp Lys Phe Lys Leu Ser Lys Gly  
Page 41

20                      25                      30  
 Glu Met Lys Glu Leu Leu His Lys Glu Leu Pro Ser Phe Val Gly Glu  
           35                      40                      45  
 Lys Val Asp Glu Glu Gly Leu Lys Lys Leu Met Gly Ser Leu Asp Glu  
           50                      55                      60  
 Asn Ser Asp Gln Gln Val Asp Phe Gln Glu Tyr Ala Val Phe Leu Ala  
           65                      70                      75                      80  
 Leu Ile Thr Val Met Cys Asn Asp Phe Phe Gln Gly Cys Pro Asp Arg  
                           85                      90                      95

Pro

<210> 27  
 <211> 271  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 27

Met Phe Arg Asp Phe Gly Glu Pro Gly Pro Ser Ser Gly Asn Gly Gly  
 1                      5                      10                      15  
 Gly Tyr Gly Gly Pro Ala Gln Pro Pro Ala Ala Ala Gln Ala Ala Gln  
           20                      25                      30  
 Gln Lys Phe His Leu Val Pro Ser Ile Asn Thr Met Ser Gly Ser Gln  
           35                      40                      45  
 Glu Leu Gln Trp Met Val Gln Pro His Phe Leu Gly Pro Ser Ser Tyr  
           50                      55                      60  
 Pro Arg Pro Leu Thr Tyr Pro Gln Tyr Ser Pro Pro Gln Pro Arg Pro  
           65                      70                      75                      80  
 Gly Val Ile Arg Ala Leu Gly Pro Pro Pro Gly Val Arg Arg Arg Pro  
                           85                      90                      95  
 Cys Glu Gln Ile Ser Pro Glu Glu Glu Glu Arg Arg Arg Val Arg Arg  
                           100                      105                      110  
 Glu Arg Asn Lys Leu Ala Ala Ala Lys Cys Arg Asn Arg Arg Lys Glu  
           115                      120                      125  
 Leu Thr Asp Phe Leu Gln Ala Glu Thr Asp Lys Leu Glu Asp Glu Lys  
           130                      135                      140  
 Ser Gly Leu Gln Arg Glu Ile Glu Glu Leu Gln Lys Gln Lys Glu Arg  
           145                      150                      155                      160

Leu Glu Leu Val Leu Glu Ala His Arg Pro Ile Cys Lys Ile Pro Glu  
165 170 175

Gly Ala Lys Glu Gly Asp Thr Gly Ser Thr Ser Gly Thr Ser Ser Pro  
180 185 190

Pro Ala Pro Cys Arg Pro Val Pro Cys Ile Ser Leu Ser Pro Gly Pro  
195 200 205

Val Leu Glu Pro Glu Ala Leu His Thr Pro Thr Leu Met Thr Thr Pro  
210 215 220

Ser Leu Thr Pro Phe Thr Pro Ser Leu Val Phe Thr Tyr Pro Ser Thr  
225 230 235 240

Pro Glu Pro Cys Ala Ser Ala His Arg Lys Ser Ser Ser Ser Ser Gly  
245 250 255

Asp Pro Ser Ser Asp Pro Leu Gly Ser Pro Thr Leu Leu Ala Leu  
260 265 270

<210> 28  
<211> 410  
<212> PRT  
<213> Homo sapiens

<400> 28

Met Ala Phe Leu Gly Leu Phe Ser Leu Leu Val Leu Gln Ser Met Ala  
1 5 10 15

Thr Gly Ala Thr Phe Pro Glu Glu Ala Ile Ala Asp Leu Ser Val Asn  
20 25 30

Met Tyr Asn Arg Leu Arg Ala Thr Gly Glu Asp Glu Asn Ile Leu Phe  
35 40 45

Ser Pro Leu Ser Ile Ala Leu Ala Met Gly Met Met Glu Leu Gly Ala  
50 55 60

Gln Gly Ser Thr Gln Lys Glu Ile Arg His Ser Met Gly Tyr Asp Ser  
65 70 75 80

Leu Lys Asn Gly Glu Glu Phe Ser Phe Leu Lys Glu Phe Ser Asn Met  
85 90 95

Val Thr Ala Lys Glu Ser Gln Tyr Val Met Lys Ile Ala Asn Ser Leu  
100 105 110

Phe Val Gln Asn Gly Phe His Val Asn Glu Glu Phe Leu Gln Met Met  
115 120 125

Lys Lys Tyr Phe Asn Ala Ala Val Asn His Val Asp Phe Ser Gln Asn  
 130 135 140  
 Val Ala Val Ala Asn Tyr Ile Asn Lys Trp Val Glu Asn Asn Thr Asn  
 145 150 155 160  
 Asn Leu Val Lys Asp Leu Val Ser Pro Arg Asp Phe Asp Ala Ala Thr  
 165 170 175  
 Tyr Leu Ala Leu Ile Asn Ala Val Tyr Phe Lys Gly Asn Trp Lys Ser  
 180 185 190  
 Gln Phe Arg Pro Glu Asn Thr Arg Thr Phe Ser Phe Thr Lys Asp Asp  
 195 200 205  
 Glu Ser Glu Val Gln Ile Pro Met Met Tyr Gln Gln Gly Glu Phe Tyr  
 210 215 220  
 Tyr Gly Glu Phe Ser Asp Gly Ser Asn Glu Ala Gly Gly Ile Tyr Gln  
 225 230 235 240  
 Val Leu Glu Ile Pro Tyr Glu Gly Asp Glu Ile Ser Met Met Leu Val  
 245 250 255  
 Leu Ser Arg Gln Glu Val Pro Leu Ala Thr Leu Glu Pro Leu Val Lys  
 260 265 270  
 Ala Gln Leu Val Glu Glu Trp Ala Asn Ser Val Lys Lys Gln Lys Val  
 275 280 285  
 Glu Val Tyr Leu Pro Arg Phe Thr Val Glu Gln Glu Ile Asp Leu Lys  
 290 295 300  
 Asp Val Leu Lys Ala Leu Gly Ile Thr Glu Ile Phe Ile Lys Asp Ala  
 305 310 315 320  
 Asn Leu Thr Gly Leu Ser Asp Asn Lys Glu Ile Phe Leu Ser Lys Ala  
 325 330 335  
 Ile His Lys Ser Phe Leu Glu Val Asn Glu Glu Gly Ser Glu Ala Ala  
 340 345 350  
 Ala Val Ser Gly Met Ile Ala Ile Ser Arg Met Ala Val Leu Tyr Pro  
 355 360 365  
 Gln Val Ile Val Asp His Pro Phe Phe Phe Leu Ile Arg Asn Arg Arg  
 370 375 380  
 Thr Gly Thr Ile Leu Phe Met Gly Arg Val Met His Pro Glu Thr Met  
 385 390 395 400

Asn Thr Ser Gly His Asp Phe Glu Glu Leu  
405 410

<210> 29  
<211> 280  
<212> PRT  
<213> Homo sapiens

<400> 29

Met Leu Ser Ala Val Ala Arg Gly Tyr Gln Gly Trp Phe His Pro Cys  
1 5 10 15

Ala Arg Leu Ser Val Arg Met Ser Ser Thr Gly Ile Asp Arg Lys Gly  
20 25 30

Val Leu Ala Asn Arg Val Ala Val Val Thr Gly Ser Thr Ser Gly Ile  
35 40 45

Gly Phe Ala Ile Ala Arg Arg Leu Ala Arg Asp Gly Ala His Val Val  
50 55 60

Ile Ser Ser Arg Lys Gln Gln Asn Val Asp Arg Ala Met Ala Lys Leu  
65 70 75 80

Gln Gly Glu Gly Leu Ser Val Ala Gly Ile Val Cys His Val Gly Lys  
85 90 95

Ala Glu Asp Arg Glu Gln Leu Val Ala Lys Ala Leu Glu His Cys Gly  
100 105 110

Gly Val Asp Phe Leu Val Cys Ser Ala Gly Val Asn Pro Leu Val Gly  
115 120 125

Ser Thr Leu Gly Thr Ser Glu Gln Ile Trp Asp Lys Ile Leu Ser Val  
130 135 140

Asn Val Lys Ser Pro Ala Leu Leu Leu Ser Gln Leu Leu Pro Tyr Met  
145 150 155 160

Glu Asn Arg Arg Gly Ala Val Ile Leu Val Ser Ser Ile Ala Ala Tyr  
165 170 175

Asn Pro Val Val Ala Leu Gly Val Tyr Asn Val Ser Lys Thr Ala Leu  
180 185 190

Leu Gly Leu Thr Arg Thr Leu Ala Leu Glu Leu Ala Pro Lys Asp Ile  
195 200 205

Arg Val Asn Cys Val Val Pro Gly Ile Ile Lys Thr Asp Phe Ser Lys  
210 215 220

Val Phe His Gly Asn Glu Ser Leu Trp Lys Asn Phe Lys Glu His His  
225 230 235 240

Gln Leu Gln Arg Ile Gly Glu Ser Glu Asp Cys Ala Gly Ile Val Ser  
245 250 255

Phe Leu Cys Ser Pro Asp Ala Ser Tyr Val Asn Gly Glu Asn Ile Ala  
260 265 270

Val Ala Gly Tyr Ser Thr Arg Leu  
275 280

<210> 30  
<211> 193  
<212> PRT  
<213> Homo sapiens

<400> 30

Met Gln Ser Leu Met Gln Ala Pro Leu Leu Ile Ala Leu Gly Leu Leu  
1 5 10 15

Leu Ala Ala Pro Ala Gln Ala His Leu Lys Lys Pro Ser Gln Leu Ser  
20 25 30

Ser Phe Ser Trp Asp Asn Cys Asp Glu Gly Lys Asp Pro Ala Val Ile  
35 40 45

Arg Ser Leu Thr Leu Glu Pro Asp Pro Ile Ile Val Pro Gly Asn Val  
50 55 60

Thr Leu Ser Val Met Gly Ser Thr Ser Val Pro Leu Ser Ser Pro Leu  
65 70 75 80

Lys Val Asp Leu Val Leu Glu Lys Glu Val Ala Gly Leu Trp Ile Lys  
85 90 95

Ile Pro Cys Thr Asp Tyr Ile Gly Ser Cys Thr Phe Glu His Phe Cys  
100 105 110

Asp Val Leu Asp Met Leu Ile Pro Thr Gly Glu Pro Cys Pro Glu Pro  
115 120 125

Leu Arg Thr Tyr Gly Leu Pro Cys His Cys Pro Phe Lys Glu Gly Thr  
130 135 140

Tyr Ser Leu Pro Lys Ser Glu Phe Val Val Pro Asp Leu Glu Leu Pro  
145 150 155 160

Ser Trp Leu Thr Thr Gly Asn Tyr Arg Ile Glu Ser Val Leu Ser Ser  
165 170 175

Ser Gly Lys Arg Leu Gly Cys Ile Lys Ile Ala Ala Ser Leu Lys Gly  
Page 46

180

185

190

Ile

<210> 31  
 <211> 187  
 <212> PRT  
 <213> Homo sapiens

<400> 31

Met Ser Glu Met Ala Glu Leu Ser Glu Leu Tyr Glu Glu Ser Ser Asp  
 1 5 10 15

Leu Gln Met Asp Val Met Pro Gly Glu Gly Asp Leu Pro Gln Met Glu  
 20 25 30

Val Gly Ser Gly Ser Arg Glu Leu Ser Leu Arg Pro Ser Arg Ser Gly  
 35 40 45

Ala Gln Gln Leu Glu Glu Glu Gly Pro Met Glu Glu Glu Glu Ala Gln  
 50 55 60

Pro Met Ala Ala Pro Glu Gly Lys Arg Ser Leu Ala Asn Gly Pro Asn  
 65 70 75 80

Ala Gly Glu Gln Pro Gly Gln Val Ala Gly Ala Asp Phe Glu Ser Glu  
 85 90 95

Asp Glu Gly Glu Glu Phe Asp Asp Trp Glu Asp Asp Tyr Asp Tyr Pro  
 100 105 110

Glu Glu Glu Gln Leu Ser Gly Ala Gly Tyr Arg Val Ser Ala Ala Leu  
 115 120 125

Glu Glu Ala Asp Lys Met Phe Leu Arg Thr Arg Glu Pro Ala Leu Asp  
 130 135 140

Gly Gly Phe Gln Met His Tyr Glu Lys Thr Pro Phe Asp Gln Leu Ala  
 145 150 155 160

Phe Ile Glu Glu Leu Phe Ser Leu Met Val Val Asn Arg Leu Thr Glu  
 165 170 175

Glu Leu Gly Cys Asp Glu Ile Ile Asp Arg Glu  
 180 185

<210> 32  
 <211> 2328  
 <212> PRT  
 <213> Homo sapiens

<400> 32

Lys Ser Lys Arg Gln Ala Gln Gln Met Val Gln Pro Gln Ser Pro Val  
 1 5 10 15  
 Ala Val Ser Gln Ser Lys Pro Gly Cys Tyr Asp Asn Gly Lys His Tyr  
 20 25 30  
 Gln Ile Asn Gln Gln Trp Glu Arg Thr Tyr Leu Gly Asn Val Leu Val  
 35 40 45  
 Cys Thr Cys Tyr Gly Gly Ser Arg Gly Phe Asn Cys Glu Ser Lys Pro  
 50 55 60  
 Glu Ala Glu Glu Thr Cys Phe Asp Lys Tyr Thr Gly Asn Thr Tyr Arg  
 65 70 75 80  
 Val Gly Asp Thr Tyr Glu Arg Pro Lys Asp Ser Met Ile Trp Asp Cys  
 85 90 95  
 Thr Cys Ile Gly Ala Gly Arg Gly Arg Ile Ser Cys Thr Ile Ala Asn  
 100 105 110  
 Arg Cys His Glu Gly Gly Gln Ser Tyr Lys Ile Gly Asp Thr Trp Arg  
 115 120 125  
 Arg Pro His Glu Thr Gly Gly Tyr Met Leu Glu Cys Val Cys Leu Gly  
 130 135 140  
 Asn Gly Lys Gly Glu Trp Thr Cys Lys Pro Ile Ala Glu Lys Cys Phe  
 145 150 155 160  
 Asp His Ala Ala Gly Thr Ser Tyr Val Val Gly Glu Thr Trp Glu Lys  
 165 170 175  
 Pro Tyr Gln Gly Trp Met Met Val Asp Cys Thr Cys Leu Gly Glu Gly  
 180 185 190  
 Ser Gly Arg Ile Thr Cys Thr Ser Arg Asn Arg Cys Asn Asp Gln Asp  
 195 200 205  
 Thr Arg Thr Ser Tyr Arg Ile Gly Asp Thr Trp Ser Lys Lys Asp Asn  
 210 215 220  
 Arg Gly Asn Leu Leu Gln Cys Ile Cys Thr Gly Asn Gly Arg Gly Glu  
 225 230 235 240  
 Trp Lys Cys Glu Arg His Thr Ser Val Gln Thr Thr Ser Ser Gly Ser  
 245 250 255  
 Gly Pro Phe Thr Asp Val Arg Ala Ala Val Tyr Gln Pro Gln Pro His  
 260 265 270



Pro Gln Pro Pro Pro Tyr Gly His Cys Val Thr Asp Ser Gly Val Val  
 275 280 285  
 Tyr Ser Val Gly Met Gln Trp Leu Lys Thr Gln Gly Asn Lys Gln Met  
 290 295 300  
 Leu Cys Thr Cys Leu Gly Asn Gly Val Ser Cys Gln Glu Thr Ala Val  
 305 310 315 320  
 Thr Gln Thr Tyr Gly Gly Asn Leu Asn Gly Glu Pro Cys Val Leu Pro  
 325 330 335  
 Phe Thr Tyr Asn Gly Arg Thr Phe Tyr Ser Cys Thr Thr Glu Gly Arg  
 340 345 350  
 Gln Asp Gly His Leu Trp Cys Ser Thr Thr Ser Asn Tyr Glu Gln Asp  
 355 360 365  
 Gln Lys Tyr Ser Phe Cys Thr Asp His Thr Val Leu Val Gln Thr Gln  
 370 375 380  
 Gly Gly Asn Ser Asn Gly Ala Leu Cys His Phe Pro Phe Leu Tyr Asn  
 385 390 395 400  
 Asn His Asn Tyr Thr Asp Cys Thr Ser Glu Gly Arg Arg Asp Asn Met  
 405 410 415  
 Lys Trp Cys Gly Thr Thr Gln Asn Tyr Asp Ala Asp Gln Lys Phe Gly  
 420 425 430  
 Phe Cys Pro Met Ala Ala His Glu Glu Ile Cys Thr Thr Asn Glu Gly  
 435 440 445  
 Val Met Tyr Arg Ile Gly Asp Gln Trp Asp Lys Gln His Asp Met Gly  
 450 455 460  
 His Met Met Arg Cys Thr Cys Val Gly Asn Gly Arg Gly Glu Trp Thr  
 465 470 475 480  
 Cys Ile Ala Tyr Ser Gln Leu Arg Asp Gln Cys Ile Val Asp Asp Ile  
 485 490 495  
 Thr Tyr Asn Val Asn Asp Thr Phe His Lys Arg His Glu Glu Gly His  
 500 505 510  
 Met Leu Asn Cys Thr Cys Phe Gly Gln Gly Arg Gly Arg Trp Lys Cys  
 515 520 525  
 Asp Pro Val Asp Gln Cys Gln Asp Ser Glu Thr Gly Thr Phe Tyr Gln  
 530 535 540

Ile Gly Asp Ser Trp Glu Lys Tyr Val His Gly Val Arg Tyr Gln Cys  
 545 550 555 560  
 Tyr Cys Tyr Gly Arg Gly Ile Gly Glu Trp His Cys Gln Pro Leu Gln  
 565 570 575  
 Thr Tyr Pro Ser Ser Ser Gly Pro Val Glu Val Phe Ile Thr Glu Thr  
 580 585 590  
 Pro Ser Gln Pro Asn Ser His Pro Ile Gln Trp Asn Ala Pro Gln Pro  
 595 600 605  
 Ser His Ile Ser Lys Tyr Ile Leu Arg Trp Arg Pro Lys Asn Ser Val  
 610 615 620  
 Gly Arg Trp Lys Glu Ala Thr Ile Pro Gly His Leu Asn Ser Tyr Thr  
 625 630 635 640  
 Ile Lys Gly Leu Lys Pro Gly Val Val Tyr Glu Gly Gln Leu Ile Ser  
 645 650 655  
 Ile Gln Gln Tyr Gly His Gln Glu Val Thr Arg Phe Asp Phe Thr Thr  
 660 665 670  
 Thr Ser Thr Ser Thr Pro Val Thr Ser Asn Thr Val Thr Gly Glu Thr  
 675 680 685  
 Thr Pro Phe Ser Pro Leu Val Ala Thr Ser Glu Ser Val Thr Glu Ile  
 690 695 700  
 Thr Ala Ser Ser Phe Val Val Ser Trp Val Ser Ala Ser Asp Thr Val  
 705 710 715 720  
 Ser Gly Phe Arg Val Glu Tyr Glu Leu Ser Glu Glu Gly Asp Glu Pro  
 725 730 735  
 Gln Tyr Leu Asp Leu Pro Ser Thr Ala Thr Ser Val Asn Ile Pro Asp  
 740 745 750  
 Leu Leu Pro Gly Arg Lys Tyr Ile Val Asn Val Tyr Gln Ile Ser Glu  
 755 760 765  
 Asp Gly Glu Gln Ser Leu Ile Leu Ser Thr Ser Gln Thr Thr Ala Pro  
 770 775 780  
 Asp Ala Pro Pro Asp Pro Thr Val Asp Gln Val Asp Asp Thr Ser Ile  
 785 790 795 800  
 Val Val Arg Trp Ser Arg Pro Gln Ala Pro Ile Thr Gly Tyr Arg Ile  
 805 810 815

Val Tyr Ser Pro Ser Val Glu Gly Ser Ser Thr Glu Leu Asn Leu Pro  
                   820                                  825                                  830

Glu Thr Ala Asn Ser Val Thr Leu Ser Asp Leu Gln Pro Gly Val Gln  
                   835                                  840                                  845

Tyr Asn Ile Thr Ile Tyr Ala Val Glu Glu Asn Gln Glu Ser Thr Pro  
                   850                                  855                                  860

Val Val Ile Gln Gln Glu Thr Thr Gly Thr Pro Arg Ser Asp Thr Val  
                   865                                  870                                  875                                  880

Pro Ser Pro Arg Asp Leu Gln Phe Val Glu Val Thr Asp Val Lys Val  
                                   885                                  890                                  895

Thr Ile Met Trp Thr Pro Pro Glu Ser Ala Val Thr Gly Tyr Arg Val  
                                   900                                  905                                  910

Asp Val Ile Pro Val Asn Leu Pro Gly Glu His Gly Gln Arg Leu Pro  
                   915                                  920                                  925

Ile Ser Arg Asn Thr Phe Ala Glu Val Thr Gly Leu Ser Pro Gly Val  
                   930                                  935                                  940

Thr Tyr Tyr Phe Lys Val Phe Ala Val Ser His Gly Arg Glu Ser Lys  
                   945                                  950                                  955                                  960

Pro Leu Thr Ala Gln Gln Thr Thr Lys Leu Asp Ala Pro Thr Asn Leu  
                                   965                                  970                                  975

Gln Phe Val Asn Glu Thr Asp Ser Thr Val Leu Val Arg Trp Thr Pro  
                                   980                                  985                                  990

Pro Arg Ala Gln Ile Thr Gly Tyr Arg Leu Thr Val Gly Leu Thr Arg  
                   995                                  1000                                  1005

Arg Gly Gln Pro Arg Gln Tyr Asn Val Gly Pro Ser Val Ser Lys  
                   1010                                  1015                                  1020

Tyr Pro Leu Arg Asn Leu Gln Pro Ala Ser Glu Tyr Thr Val Ser  
                   1025                                  1030                                  1035

Leu Val Ala Ile Lys Gly Asn Gln Glu Ser Pro Lys Ala Thr Gly  
                   1040                                  1045                                  1050

Val Phe Thr Thr Leu Gln Pro Gly Ser Ser Ile Pro Pro Tyr Asn  
                   1055                                  1060                                  1065

Thr Glu Val Thr Glu Thr Thr Ile Val Ile Thr Trp Thr Pro Ala  
                   1070                                  1075                                  1080

Pro Arg Ile Gly Phe Lys Leu Gly Val Arg Pro Ser Gln Gly Gly  
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 Glu Ala Pro Arg Glu Val Thr Ser Asp Ser Gly Ser Ile Val Val  
 1100 1105 1110  
 Ser Gly Leu Thr Pro Gly Val Glu Tyr Val Tyr Thr Ile Gln Val  
 1115 1120 1125  
 Leu Arg Asp Gly Gln Glu Arg Asp Ala Pro Ile Val Asn Lys Val  
 1130 1135 1140  
 Val Thr Pro Leu Ser Pro Pro Thr Asn Leu His Leu Glu Ala Asn  
 1145 1150 1155  
 Pro Asp Thr Gly Val Leu Thr Val Ser Trp Glu Arg Ser Thr Thr  
 1160 1165 1170  
 Pro Asp Ile Thr Gly Tyr Arg Ile Thr Thr Thr Pro Thr Asn Gly  
 1175 1180 1185  
 Gln Gln Gly Asn Ser Leu Glu Glu Val Val His Ala Asp Gln Ser  
 1190 1195 1200  
 Ser Cys Thr Phe Asp Asn Leu Ser Pro Gly Leu Glu Tyr Asn Val  
 1205 1210 1215  
 Ser Val Tyr Thr Val Lys Asp Asp Lys Glu Ser Val Pro Ile Ser  
 1220 1225 1230  
 Asp Thr Ile Ile Pro Ala Val Pro Pro Pro Thr Asp Leu Arg Phe  
 1235 1240 1245  
 Thr Asn Ile Gly Pro Asp Thr Met Arg Val Thr Trp Ala Pro Pro  
 1250 1255 1260  
 Pro Ser Ile Asp Leu Thr Asn Phe Leu Val Arg Tyr Ser Pro Val  
 1265 1270 1275  
 Lys Asn Glu Glu Asp Val Ala Glu Leu Ser Ile Ser Pro Ser Asp  
 1280 1285 1290  
 Asn Ala Val Val Leu Thr Asn Leu Leu Pro Gly Thr Glu Tyr Val  
 1295 1300 1305  
 Val Ser Val Ser Ser Val Tyr Glu Gln His Glu Ser Thr Pro Leu  
 1310 1315 1320  
 Arg Gly Arg Gln Lys Thr Gly Leu Asp Ser Pro Thr Gly Ile Asp  
 1325 1330 1335

Phe Ser Asp Ile Thr Ala Asn Ser Phe Thr Val His Trp Ile Ala  
 1340 1345 1350  
 Pro Arg Ala Thr Ile Thr Gly Tyr Arg Ile Arg His His Pro Glu  
 1355 1360 1365  
 His Phe Ser Gly Arg Pro Arg Glu Asp Arg Val Pro His Ser Arg  
 1370 1375 1380  
 Asn Ser Ile Thr Leu Thr Asn Leu Thr Pro Gly Thr Glu Tyr Val  
 1385 1390 1395  
 Val Ser Ile Val Ala Leu Asn Gly Arg Glu Glu Ser Pro Leu Leu  
 1400 1405 1410  
 Ile Gly Gln Gln Ser Thr Val Ser Asp Val Pro Arg Asp Leu Glu  
 1415 1420 1425  
 Val Val Ala Ala Thr Pro Thr Ser Leu Leu Ile Ser Trp Asp Ala  
 1430 1435 1440  
 Pro Ala Val Thr Val Arg Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr  
 1445 1450 1455  
 Gly Gly Asn Ser Pro Val Gln Glu Phe Thr Val Pro Gly Ser Lys  
 1460 1465 1470  
 Ser Thr Ala Thr Ile Ser Gly Leu Lys Pro Gly Val Asp Tyr Thr  
 1475 1480 1485  
 Ile Thr Val Tyr Ala Val Thr Gly Arg Gly Asp Ser Pro Ala Ser  
 1490 1495 1500  
 Ser Lys Pro Ile Ser Ile Asn Tyr Arg Thr Glu Ile Asp Lys Pro  
 1505 1510 1515  
 Ser Gln Met Gln Val Thr Asp Val Gln Asp Asn Ser Ile Ser Val  
 1520 1525 1530  
 Lys Trp Leu Pro Ser Ser Ser Pro Val Thr Gly Tyr Arg Val Thr  
 1535 1540 1545  
 Thr Thr Pro Lys Asn Gly Pro Gly Pro Thr Lys Thr Lys Thr Ala  
 1550 1555 1560  
 Gly Pro Asp Gln Thr Glu Met Thr Ile Glu Gly Leu Gln Pro Thr  
 1565 1570 1575  
 Val Glu Tyr Val Val Ser Val Tyr Ala Gln Asn Pro Ser Gly Glu  
 1580 1585 1590

Ser Gln Pro Leu Val Gln Thr Ala Val Thr Asn Ile Asp Arg Pro  
 1595 1600 1605  
 Lys Gly Leu Ala Phe Thr Asp Val Asp Val Asp Ser Ile Lys Ile  
 1610 1615 1620  
 Ala Trp Glu Ser Pro Gln Gly Gln Val Ser Arg Tyr Arg Val Thr  
 1625 1630 1635  
 Tyr Ser Ser Pro Glu Asp Gly Ile His Glu Leu Phe Pro Ala Pro  
 1640 1645 1650  
 Asp Gly Glu Glu Asp Thr Ala Glu Leu Gln Gly Leu Arg Pro Gly  
 1655 1660 1665  
 Ser Glu Tyr Thr Val Ser Val Val Ala Leu His Asp Asp Met Glu  
 1670 1675 1680  
 Ser Gln Pro Leu Ile Gly Thr Gln Ser Thr Ala Ile Pro Ala Pro  
 1685 1690 1695  
 Thr Asp Leu Lys Phe Thr Gln Val Thr Pro Thr Ser Leu Ser Ala  
 1700 1705 1710  
 Gln Trp Thr Pro Pro Asn Val Gln Leu Thr Gly Tyr Arg Val Arg  
 1715 1720 1725  
 Val Thr Pro Lys Glu Lys Thr Gly Pro Met Lys Glu Ile Asn Leu  
 1730 1735 1740  
 Ala Pro Asp Ser Ser Ser Val Val Val Ser Gly Leu Met Val Ala  
 1745 1750 1755  
 Thr Lys Tyr Glu Val Ser Val Tyr Ala Leu Lys Asp Thr Leu Thr  
 1760 1765 1770  
 Ser Arg Pro Ala Gln Gly Val Val Thr Thr Leu Glu Asn Val Ser  
 1775 1780 1785  
 Pro Pro Arg Arg Ala Arg Val Thr Asp Ala Thr Glu Thr Thr Ile  
 1790 1795 1800  
 Thr Ile Ser Trp Arg Thr Lys Thr Glu Thr Ile Thr Gly Phe Gln  
 1805 1810 1815  
 Val Asp Ala Val Pro Ala Asn Gly Gln Thr Pro Ile Gln Arg Thr  
 1820 1825 1830  
 Ile Lys Pro Asp Val Arg Ser Tyr Thr Ile Thr Gly Leu Gln Pro  
 1835 1840 1845

Gly Thr Asp Tyr Lys Ile Tyr Leu Tyr Thr Leu Asn Asp Asn Ala  
 1850 1855 1860  
 Arg Ser Ser Pro Val Val Ile Asp Ala Ser Thr Ala Ile Asp Ala  
 1865 1870 1875  
 Pro Ser Asn Leu Arg Phe Leu Ala Thr Thr Pro Asn Ser Leu Leu  
 1880 1885 1890  
 Val Ser Trp Gln Pro Pro Arg Ala Arg Ile Thr Gly Tyr Ile Ile  
 1895 1900 1905  
 Lys Tyr Glu Lys Pro Gly Ser Pro Pro Arg Glu Val Val Pro Arg  
 1910 1915 1920  
 Pro Arg Pro Gly Val Thr Glu Ala Thr Ile Thr Gly Leu Glu Pro  
 1925 1930 1935  
 Gly Thr Glu Tyr Thr Ile Tyr Val Ile Ala Leu Lys Asn Asn Gln  
 1940 1945 1950  
 Lys Ser Glu Pro Leu Ile Gly Arg Lys Lys Thr Asp Glu Leu Pro  
 1955 1960 1965  
 Gln Leu Val Thr Leu Pro His Pro Asn Leu His Gly Pro Glu Ile  
 1970 1975 1980  
 Leu Asp Val Pro Ser Thr Val Gln Lys Thr Pro Phe Val Thr His  
 1985 1990 1995  
 Pro Gly Tyr Asp Thr Gly Asn Gly Ile Gln Leu Pro Gly Thr Ser  
 2000 2005 2010  
 Gly Gln Gln Pro Ser Val Gly Gln Gln Met Ile Phe Glu Glu His  
 2015 2020 2025  
 Gly Phe Arg Arg Thr Thr Pro Pro Thr Thr Ala Thr Pro Ile Arg  
 2030 2035 2040  
 His Arg Pro Arg Pro Tyr Pro Pro Asn Val Gly Gln Glu Ala Leu  
 2045 2050 2055  
 Ser Gln Thr Thr Ile Ser Trp Ala Pro Phe Gln Asp Thr Ser Glu  
 2060 2065 2070  
 Tyr Ile Ile Ser Cys His Pro Val Gly Thr Asp Glu Glu Pro Leu  
 2075 2080 2085  
 Gln Phe Arg Val Pro Gly Thr Ser Thr Ser Ala Thr Leu Thr Gly  
 2090 2095 2100

Leu Thr Arg Gly Ala Thr Tyr Asn Ile Ile Val Glu Ala Leu Lys  
 2105 2110 2115  
 Asp Gln Gln Arg His Lys Val Arg Glu Glu Val Val Thr Val Gly  
 2120 2125 2130  
 Asn Ser Val Asn Glu Gly Leu Asn Gln Pro Thr Asp Asp Ser Cys  
 2135 2140 2145  
 Phe Asp Pro Tyr Thr Val Ser His Tyr Ala Val Gly Asp Glu Trp  
 2150 2155 2160  
 Glu Arg Met Ser Glu Ser Gly Phe Lys Leu Leu Cys Gln Cys Leu  
 2165 2170 2175  
 Gly Phe Gly Ser Gly His Phe Arg Cys Asp Ser Ser Arg Trp Cys  
 2180 2185 2190  
 His Asp Asn Gly Val Asn Tyr Lys Ile Gly Glu Lys Trp Asp Arg  
 2195 2200 2205  
 Gln Gly Glu Asn Gly Gln Met Met Ser Cys Thr Cys Leu Gly Asn  
 2210 2215 2220  
 Gly Lys Gly Glu Phe Lys Cys Asp Pro His Glu Ala Thr Cys Tyr  
 2225 2230 2235  
 Asp Asp Gly Lys Thr Tyr His Val Gly Glu Gln Trp Gln Lys Glu  
 2240 2245 2250  
 Tyr Leu Gly Ala Ile Cys Ser Cys Thr Cys Phe Gly Gly Gln Arg  
 2255 2260 2265  
 Gly Trp Arg Cys Asp Asn Cys Arg Arg Pro Gly Gly Glu Pro Ser  
 2270 2275 2280  
 Pro Glu Gly Thr Thr Gly Gln Ser Tyr Asn Gln Tyr Ser Gln Arg  
 2285 2290 2295  
 Tyr His Gln Arg Thr Asn Thr Asn Val Asn Cys Pro Ile Glu Cys  
 2300 2305 2310  
 Phe Met Pro Leu Asp Val Gln Ala Asp Arg Glu Asp Ser Arg Glu  
 2315 2320 2325

<210> 33  
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 <212> PRT  
 <213> Homo sapiens

<400> 33



Met Leu Ser Ala Val Ala Arg Gly Tyr Gln Gly Trp Phe His Pro Cys  
 1 5 10 15  
 Ala Arg Leu Ser Val Arg Met Ser Ser Thr Gly Ile Asp Arg Lys Gly  
 20 25 30  
 Val Leu Ala Asn Arg Val Ala Val Val Thr Gly Ser Thr Ser Gly Ile  
 35 40 45  
 Gly Phe Ala Ile Ala Arg Arg Leu Ala Arg Asp Gly Ala His Val Val  
 50 55 60  
 Ile Ser Ser Arg Lys Gln Gln Asn Val Asp Arg Ala Met Ala Lys Leu  
 65 70 75 80  
 Gln Gly Glu Gly Leu Ser Val Ala Gly Ile Val Cys His Val Gly Lys  
 85 90 95  
 Ala Glu Asp Arg Glu Gln Leu Val Ala Lys Ala Leu Glu His Cys Gly  
 100 105 110  
 Gly Val Asp Phe Leu Val Cys Ser Ala Gly Val Asn Pro Leu Val Gly  
 115 120 125  
 Ser Thr Leu Gly Thr Ser Glu Gln Ile Trp Asp Lys Ile Leu Ser Val  
 130 135 140  
 Asn Val Lys Ser Pro Ala Leu Leu Leu Ser Gln Leu Leu Pro Tyr Met  
 145 150 155 160  
 Glu Asn Arg Arg Gly Ala Val Ile Leu Val Ser Ser Ile Ala Ala Tyr  
 165 170 175  
 Asn Pro Val Val Ala Leu Gly Val Tyr Asn Val Ser Lys Thr Ala Leu  
 180 185 190  
 Leu Gly Leu Thr Arg Thr Leu Ala Leu Glu Leu Ala Pro Lys Asp Ile  
 195 200 205  
 Arg Val Asn Cys Val Val Pro Gly Ile Ile Lys Thr Asp Phe Ser Lys  
 210 215 220  
 Val Phe His Gly Asn Glu Ser Leu Trp Lys Asn Phe Lys Glu His His  
 225 230 235 240  
 Gln Leu Gln Arg Ile Gly Glu Ser Glu Asp Cys Ala Gly Ile Val Ser  
 245 250 255  
 Phe Leu Cys Ser Pro Asp Ala Ser Tyr Val Asn Gly Glu Asn Ile Ala  
 260 265 270

Val Ala Gly Tyr Ser Thr Arg Leu  
275 280

<210> 34  
<211> 433  
<212> PRT  
<213> Homo sapiens

<400> 34

Met Ala Leu Arg Val Thr Arg Asn Ser Lys Ile Asn Ala Glu Asn Lys  
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Ala Lys Ile Asn Met Ala Gly Ala Lys Arg Val Pro Thr Ala Pro Ala  
20 25 30

Ala Thr Ser Lys Pro Gly Leu Arg Pro Arg Thr Ala Leu Gly Asp Ile  
35 40 45

Gly Asn Lys Val Ser Glu Gln Leu Gln Ala Lys Met Pro Met Lys Lys  
50 55 60

Glu Ala Lys Pro Ser Ala Thr Gly Lys Val Ile Asp Lys Lys Leu Pro  
65 70 75 80

Lys Pro Leu Glu Lys Val Pro Met Leu Val Pro Val Pro Val Ser Glu  
85 90 95

Pro Val Pro Glu Pro Glu Pro Glu Pro Glu Pro Glu Pro Val Lys Glu  
100 105 110

Glu Lys Leu Ser Pro Glu Pro Ile Leu Val Asp Thr Ala Ser Pro Ser  
115 120 125

Pro Met Glu Thr Ser Gly Cys Ala Pro Ala Glu Glu Asp Leu Cys Gln  
130 135 140

Ala Phe Ser Asp Val Ile Leu Ala Val Asn Asp Val Asp Ala Glu Asp  
145 150 155 160

Gly Ala Asp Pro Asn Leu Cys Ser Glu Tyr Val Lys Asp Ile Tyr Ala  
165 170 175

Tyr Leu Arg Gln Leu Glu Glu Glu Gln Ala Val Arg Pro Lys Tyr Leu  
180 185 190

Leu Gly Arg Glu Val Thr Gly Asn Met Arg Ala Ile Leu Ile Asp Trp  
195 200 205

Leu Val Gln Val Gln Met Lys Phe Arg Leu Leu Gln Glu Thr Met Tyr  
210 215 220

Met Thr Val Ser Ile Ile Asp Arg Phe Met Gln Asn Asn Cys Val Pro  
Page 58

225                      230                      235                      240  
 Lys Lys Met Leu Gln Leu Val Gly Val Thr Ala Met Phe Ile Ala Ser  
                                  245                                   250                                   255  
 Lys Tyr Glu Glu Met Tyr Pro Pro Glu Ile Gly Asp Phe Ala Phe Val  
                                  260                                   265                                   270  
 Thr Asp Asn Thr Tyr Thr Lys His Gln Ile Arg Gln Met Glu Met Lys  
                                  275                                   280                                   285  
 Ile Leu Arg Ala Leu Asn Phe Gly Leu Gly Arg Pro Leu Pro Leu His  
                                  290                                   295                                   300  
 Phe Leu Arg Arg Ala Ser Lys Ile Gly Glu Val Asp Val Glu Gln His  
                                  305                                   310                                   315                                   320  
 Thr Leu Ala Lys Tyr Leu Met Glu Leu Thr Met Leu Asp Tyr Asp Met  
                                  325                                   330                                   335  
 Val His Phe Pro Pro Ser Gln Ile Ala Ala Gly Ala Phe Cys Leu Ala  
                                  340                                   345                                   350  
 Leu Lys Ile Leu Asp Asn Gly Glu Trp Thr Pro Thr Leu Gln His Tyr  
                                  355                                   360                                   365  
 Leu Ser Tyr Thr Glu Glu Ser Leu Leu Pro Val Met Gln His Leu Ala  
                                  370                                   375                                   380  
 Lys Asn Val Val Met Val Asn Gln Gly Leu Thr Lys His Met Thr Val  
                                  385                                   390                                   395                                   400  
 Lys Asn Lys Tyr Ala Thr Ser Lys His Ala Lys Ile Ser Thr Leu Pro  
                                  405                                   410                                   415  
 Gln Leu Asn Ser Ala Leu Val Gln Asp Leu Ala Lys Ala Val Ala Lys  
                                  420                                   425                                   430

Val

<210> 35  
 <211> 1078  
 <212> PRT  
 <213> Homo sapiens

<400> 35

Met Ala Pro Arg Lys Arg Gly Gly Arg Gly Ile Ser Phe Ile Phe Cys  
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Cys Phe Arg Asn Asn Asp His Pro Glu Ile Thr Tyr Arg Leu Arg Asn  
 20                      25                      30

Asp Ser Asn Phe Ala Leu Gln Thr Met Glu Pro Ala Leu Pro Met Pro  
 35 40 45  
 Pro Val Glu Glu Leu Asp Val Met Phe Ser Glu Leu Val Asp Glu Leu  
 50 55 60  
 Asp Leu Thr Asp Lys His Arg Glu Ala Met Phe Ala Leu Pro Ala Glu  
 65 70 75 80  
 Lys Lys Trp Gln Ile Tyr Cys Ser Lys Lys Lys Asp Gln Glu Glu Asn  
 85 90 95  
 Lys Gly Ala Thr Ser Trp Pro Glu Phe Tyr Ile Asp Gln Leu Asn Ser  
 100 105 110  
 Met Ala Ala Arg Lys Ser Leu Leu Ala Leu Glu Lys Glu Glu Glu Glu  
 115 120 125  
 Glu Arg Ser Lys Thr Ile Glu Ser Leu Lys Thr Ala Leu Arg Thr Lys  
 130 135 140  
 Pro Met Arg Phe Val Thr Arg Phe Ile Asp Leu Asp Gly Leu Ser Cys  
 145 150 155 160  
 Ile Leu Asn Phe Leu Lys Thr Met Asp Tyr Glu Thr Ser Glu Ser Arg  
 165 170 175  
 Ile His Thr Ser Leu Ile Gly Cys Ile Lys Ala Leu Met Asn Asn Ser  
 180 185 190  
 Gln Gly Arg Ala His Val Leu Ala His Ser Glu Ser Ile Asn Val Ile  
 195 200 205  
 Ala Gln Ser Leu Ser Thr Glu Asn Ile Lys Thr Lys Val Ala Val Leu  
 210 215 220  
 Glu Ile Leu Gly Ala Val Cys Leu Val Pro Gly Gly His Lys Lys Val  
 225 230 235 240  
 Leu Gln Ala Met Leu His Tyr Gln Lys Tyr Ala Ser Glu Arg Thr Arg  
 245 250 255  
 Phe Gln Thr Leu Ile Asn Asp Leu Asp Lys Ser Thr Gly Arg Tyr Arg  
 260 265 270  
 Asp Glu Val Ser Leu Lys Thr Ala Ile Met Ser Phe Ile Asn Ala Val  
 275 280 285  
 Leu Ser Gln Gly Ala Gly Val Glu Ser Leu Asp Phe Arg Leu His Leu  
 290 295 300

Arg Tyr Glu Phe Leu Met Leu Gly Ile Gln Pro Val Ile Asp Lys Leu  
305 310 315 320

Arg Glu His Glu Asn Ser Thr Leu Asp Arg His Leu Asp Phe Phe Glu  
325 330 335

Met Leu Arg Asn Glu Asp Glu Leu Glu Phe Ala Lys Arg Phe Glu Leu  
340 345 350

Val His Ile Asp Thr Lys Ser Ala Thr Gln Met Phe Glu Leu Thr Arg  
355 360 365

Lys Arg Leu Thr His Ser Glu Ala Tyr Pro His Phe Met Ser Ile Leu  
370 375 380

His His Cys Leu Gln Met Pro Tyr Lys Arg Ser Gly Asn Thr Val Gln  
385 390 395 400

Tyr Trp Leu Leu Leu Asp Arg Ile Ile Gln Gln Ile Val Ile Gln Asn  
405 410 415

Asp Lys Gly Gln Asp Pro Asp Ser Thr Pro Leu Glu Asn Phe Asn Ile  
420 425 430

Lys Asn Val Val Arg Met Leu Val Asn Glu Asn Glu Val Lys Gln Trp  
435 440 445

Lys Glu Gln Ala Glu Lys Met Arg Lys Glu His Asn Glu Leu Gln Gln  
450 455 460

Lys Leu Glu Lys Lys Glu Arg Glu Cys Asp Ala Lys Thr Gln Glu Lys  
465 470 475 480

Glu Glu Met Met Gln Thr Leu Asn Lys Met Lys Glu Lys Leu Glu Lys  
485 490 495

Glu Thr Thr Glu His Lys Gln Val Lys Gln Gln Val Ala Asp Leu Thr  
500 505 510

Ala Gln Leu His Glu Leu Ser Arg Arg Ala Val Cys Ala Ser Ile Pro  
515 520 525

Gly Gly Pro Ser Pro Gly Ala Pro Gly Gly Pro Phe Pro Ser Ser Val  
530 535 540

Pro Gly Ser Leu Leu Pro Pro Pro Pro Pro Pro Leu Pro Gly Gly  
545 550 555 560

Met Leu Pro Pro Pro Pro Pro Pro Leu Pro Pro Gly Gly Pro Pro Pro  
565 570 575

Pro Pro Gly Pro Pro Pro Leu Gly Ala Ile Met Pro Pro Pro Gly Ala  
 580 585 590  
 Pro Met Gly Leu Ala Leu Lys Lys Lys Ser Ile Pro Gln Pro Thr Asn  
 595 600 605  
 Ala Leu Lys Ser Phe Asn Trp Ser Lys Leu Pro Glu Asn Lys Leu Glu  
 610 615 620  
 Gly Thr Val Trp Thr Glu Ile Asp Asp Thr Lys Val Phe Lys Ile Leu  
 625 630 635 640  
 Asp Leu Glu Asp Leu Glu Arg Thr Phe Ser Ala Tyr Gln Arg Gln Gln  
 645 650 655  
 Asp Phe Phe Val Asn Ser Asn Ser Lys Gln Lys Glu Ala Asp Ala Ile  
 660 665 670  
 Asp Asp Thr Leu Ser Ser Lys Leu Lys Val Lys Glu Leu Ser Val Ile  
 675 680 685  
 Asp Gly Arg Arg Ala Gln Asn Cys Asn Ile Leu Leu Ser Arg Leu Lys  
 690 695 700  
 Leu Ser Asn Asp Glu Ile Lys Arg Ala Ile Leu Thr Met Asp Glu Gln  
 705 710 715 720  
 Glu Asp Leu Pro Lys Asp Met Leu Glu Gln Leu Leu Lys Phe Val Pro  
 725 730 735  
 Glu Lys Ser Asp Ile Asp Leu Leu Glu Glu His Lys His Glu Leu Asp  
 740 745 750  
 Arg Met Ala Lys Ala Asp Arg Phe Leu Phe Glu Met Ser Arg Ile Asn  
 755 760 765  
 His Tyr Gln Gln Arg Leu Gln Ser Leu Tyr Phe Lys Lys Lys Phe Ala  
 770 775 780  
 Glu Arg Val Ala Glu Val Lys Pro Lys Val Glu Ala Ile Arg Ser Gly  
 785 790 795 800  
 Ser Glu Glu Val Phe Arg Ser Gly Ala Leu Lys Gln Leu Leu Glu Val  
 805 810 815  
 Val Leu Ala Phe Gly Asn Tyr Met Asn Lys Gly Gln Arg Gly Asn Ala  
 820 825 830  
 Tyr Gly Phe Lys Ile Ser Ser Leu Asn Lys Ile Ala Asp Thr Lys Ser  
 835 840 845

Ser Ile Asp Lys Asn Ile Thr Leu Leu His Tyr Leu Ile Thr Ile Val  
 850 855 860  
 Glu Asn Lys Tyr Pro Ser Val Leu Asn Leu Asn Glu Glu Leu Arg Asp  
 865 870 875 880  
 Ile Pro Gln Ala Ala Lys Val Asn Met Thr Glu Leu Asp Lys Glu Ile  
 885 890 895  
 Ser Thr Leu Arg Ser Gly Leu Lys Ala Val Glu Thr Glu Leu Glu Tyr  
 900 905 910  
 Gln Lys Ser Gln Pro Pro Gln Pro Gly Asp Lys Phe Val Ser Val Val  
 915 920 925  
 Ser Gln Phe Ile Thr Val Ala Ser Phe Ser Phe Ser Asp Val Glu Asp  
 930 935 940  
 Leu Leu Ala Glu Ala Lys Asp Leu Phe Thr Lys Ala Val Lys His Phe  
 945 950 955 960  
 Gly Glu Glu Ala Gly Lys Ile Gln Pro Asp Glu Phe Phe Gly Ile Phe  
 965 970 975  
 Asp Gln Phe Leu Gln Ala Val Ser Glu Ala Lys Gln Glu Asn Glu Asn  
 980 985 990  
 Met Arg Lys Lys Lys Glu Glu Glu Glu Arg Arg Ala Arg Met Glu Ala  
 995 1000 1005  
 Gln Leu Lys Glu Gln Arg Glu Arg Glu Arg Lys Met Arg Lys Ala  
 1010 1015 1020  
 Lys Glu Asn Ser Glu Glu Ser Gly Glu Phe Asp Asp Leu Val Ser  
 1025 1030 1035  
 Ala Leu Arg Ser Gly Glu Val Phe Asp Lys Asp Leu Ser Lys Leu  
 1040 1045 1050  
 Lys Arg Asn Arg Lys Arg Ile Thr Asn Gln Met Thr Asp Ser Ser  
 1055 1060 1065  
 Arg Glu Arg Pro Ile Thr Lys Leu Asn Phe  
 1070 1075

<210> 36  
 <211> 179  
 <212> PRT  
 <213> Homo sapiens

<400> 36

Met Val Leu Ala Trp Tyr Met Asp Asp Ala Pro Gly Asp Pro Arg Gln  
1 5 10 15

Pro His Arg Pro Asp Pro Gly Arg Pro Val Gly Leu Glu Gln Leu Arg  
20 25 30

Arg Leu Gly Val Leu Tyr Trp Lys Leu Asp Ala Asp Lys Tyr Glu Asn  
35 40 45

Asp Pro Glu Leu Glu Lys Ile Arg Arg Glu Arg Asn Tyr Ser Trp Met  
50 55 60

Asp Ile Ile Thr Ile Cys Lys Asp Lys Leu Pro Asn Tyr Glu Glu Lys  
65 70 75 80

Ile Lys Met Phe Tyr Glu Glu His Leu His Leu Asp Asp Glu Ile Arg  
85 90 95

Tyr Ile Leu Asp Gly Ser Gly Tyr Phe Asp Val Arg Asp Lys Glu Asp  
100 105 110

Gln Trp Ile Arg Ile Phe Met Glu Lys Gly Asp Met Val Thr Leu Pro  
115 120 125

Ala Gly Ile Tyr His Arg Phe Thr Val Asp Glu Lys Asn Tyr Thr Lys  
130 135 140

Ala Met Arg Leu Phe Val Gly Glu Pro Val Trp Thr Ala Tyr Asn Arg  
145 150 155 160

Pro Ala Asp His Phe Glu Ala Arg Gly Gln Tyr Val Lys Phe Leu Ala  
165 170 175

Gln Thr Ala

<210> 37  
<211> 142  
<212> PRT  
<213> Homo sapiens

<400> 37

Met Gly Ala Pro Thr Leu Pro Pro Ala Trp Gln Pro Phe Leu Lys Asp  
1 5 10 15

His Arg Ile Ser Thr Phe Lys Asn Trp Pro Phe Leu Glu Gly Cys Ala  
20 25 30

Cys Thr Pro Glu Arg Met Ala Glu Ala Gly Phe Ile His Cys Pro Thr  
35 40 45



Glu Asn Glu Pro Asp Leu Ala Gln Cys Phe Phe Cys Phe Lys Glu Leu  
50 55 60

Glu Gly Trp Glu Pro Asp Asp Asp Pro Ile Glu Glu His Lys Lys His  
65 70 75 80

Ser Ser Gly Cys Ala Phe Leu Ser Val Lys Lys Gln Phe Glu Glu Leu  
85 90 95

Thr Leu Gly Glu Phe Leu Lys Leu Asp Arg Glu Arg Ala Lys Asn Lys  
100 105 110

Ile Ala Lys Glu Thr Asn Asn Lys Lys Lys Glu Phe Glu Glu Thr Ala  
115 120 125

Lys Lys Val Arg Arg Ala Ile Glu Gln Leu Ala Ala Met Asp  
130 135 140